CONCEPT

Flexible Packaging and Corrugated Board Converting Course: Lamination, Slitting and Box Making



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Introduction:

Flexible packaging and corrugated board converting, covering lamination, slitting and box making, is a 1-week course for converting line supervisors, set-up technicians and quality staff that ends with a Converting Line Improvement Plan for a case plant. Many converters lose output to laminate delamination, telescoped reels, leaking pouch seals, warped board and crushed flutes, and cannot trace each loss back to a machine setting. Nominees already run or support printing, laminating, slitting, corrugator or die-cutting lines and learn through inspection walkthroughs of converting lines and defect samples. CoreConcept Training Center delivers this flexible packaging and corrugated board converting course.

Course Objectives:

- Map flexible film and corrugated board converting flows from reel or paper roll to finished pouch or shipping case
- Set adhesive, solventless and extrusion lamination conditions for a target laminate structure and check bond strength
- Run slitting, rewinding and pouch making with correct tension, knife choice, seal temperature and dwell settings
- Operate single facer and double backer sections, choose flute and board combinations and control warp and bonding faults
- Convert board into cases through flexo printing, rotary and flatbed die-cutting and folder-gluing within dimensional tolerance
- Measure line losses with OEE and barrier and seal tests, then build a Converting Line Improvement Plan

Target Audience:

- Converting line supervision teams responsible for shift output, changeovers and crew instructions on film or board lines
- Process set-up teams responsible for laminator, slitter, pouch machine, corrugator and die-cutter settings
- Quality control teams responsible for in-process checks, laminate and board testing and customer complaint investigation
- Maintenance planning teams responsible for rollers, knives, anilox, cutting dies and glue systems on converting equipment
- Production engineering teams responsible for waste reduction, line speed improvement and new job trials

Course Outline:

Day 1: Converting Plant Flows, Film Structures and Board Basics

- Converting Process Flow Map From Film Reel to Pouch
- Corrugated Plant Flow From Paper Roll to Shipping Case
- Laminate Structure Build With PET, BOPP, Foil and Sealant Layers
- Flute Profiles A, B, C, E and F Compared
- Converting Waste Walk and Line Loss Baseline Survey

Day 2: Lamination Methods, Bond Strength and Film Barrier Testing

- Solvent-Based Adhesive Lamination Coat Weight and Drying Settings
- Solventless Two-Component Polyurethane Lamination Mixing and Curing Windows
- Extrusion Lamination With Polyethylene Melt Curtain and Chill Roll
- Laminate Bond Strength Peel Test and Curl Check
- OTR and WVTR Barrier Measurement on Converted Laminates

Day 3: Slitting, Rewinding, Pouch Making and Corrugator Operation

- Razor, Shear and Score Slitting Knife Selection
- Rewind Tension Taper and Reel Hardness Control
- Pouch Machine Seal Jaw Temperature, Pressure and Dwell Settings
- Single Facer Steam, Starch Glue Line and Flute Forming
- Double Backer Bonding, Board Grades and Grammage Checks

Day 4: Box Making, Converting Defects and Food-Contact Controls

- Flexo Printer-Slotter Set-Up and Print Register Control
- Rotary and Flatbed Die-Cutting With Crease and Nick Design
- Folder-Gluer Settings and Box Squareness Measurement
- Warp, Washboarding, Delamination and Telescoping Root Cause Trees
- Food-Contact Hygiene, Migration Risk and Ink Selection Controls

Day 5: Inspection Walkthrough and Converting Line Improvement Plan

- Case Plant Inspection Walkthrough of Laminator and Corrugator
- OEE Availability, Performance and Quality Loss Calculation
- Edge Crush, Burst and Box Compression Results Review
- Defect Sample Diagnosis Against Machine Setting Records
- Converting Line Improvement Plan Completion and Peer Challenge

Skills You Will Gain:

- Laminate Structure Selection
- Lamination Process Set-Up
- Slitter and Rewinder Tension Control
- Heat Seal Window Setting
- Corrugator Bonding Control
- Die-Cut Tool Set-Up
- Converting Defect Diagnosis
- OEE Loss Analysis

Why Attend This Course:

- Deliver a Converting Line Improvement Plan for a case plant to the plant manager and the converting production head
- Decide which lamination route, knife type, seal setting or flute combination suits a given job and its barrier or stacking need
- Avoid scrap reels, customer claims for leaking pouches and rejected box lots caused by settings nobody recorded
- Pass on set-up sheets, defect root cause trees and OEE loss templates to shift crews and new technicians

Conclusion:

Back at the plant, the participant presents the Converting Line Improvement Plan to the plant manager, the converting production head and the quality lead. They use it to decide which lamination, slitting, pouch, corrugator or die-cutting losses to attack first, which set-up sheets and in-process tests to adopt and who owns each change. After the first month of production under the plan, the team should review OEE, scrap per job, bond and seal test results and customer claims, then adjust targets and settings.

Frequently Asked Questions FAQ:

What should participants know before the flexible packaging and corrugated board converting course?

Participants should already work on or support a printing, laminating, slitting, pouch, corrugator or box line. Bringing setting records, scrap reports or defect samples from their own line helps them apply the inspection walkthrough and the loss analysis to their plant.

How does flexible packaging and corrugated board converting differ from a packaging management or polymer processing course?

It covers running converting machines: laminators, slitters, pouch machines, corrugators, printer-slotters, die-cutters and folder-gluers. Packaging management courses cover choosing packs and writing purchase specifications, and polymer processing courses cover resin grades and making film or pipe by extrusion.

Why do flexible packaging and corrugated board converting lines lose so much output to defects?

Most defects come from small setting drifts: coat weight, cure time, rewind tension, seal temperature, steam and glue line. Without recorded settings and in-process tests, delamination, telescoping, leaking seals and warp reach the customer before anyone finds the cause.

What do participants take back from the flexible packaging and corrugated board converting course?

Participants take back a Converting Line Improvement Plan for a case plant, plus a laminate structure worksheet, set-up sheets for lamination, slitting and seal settings, a corrugator fault tree, an OEE loss template and a box defect checklist.